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Ohio-Grown Christmas Trees — production and marketing

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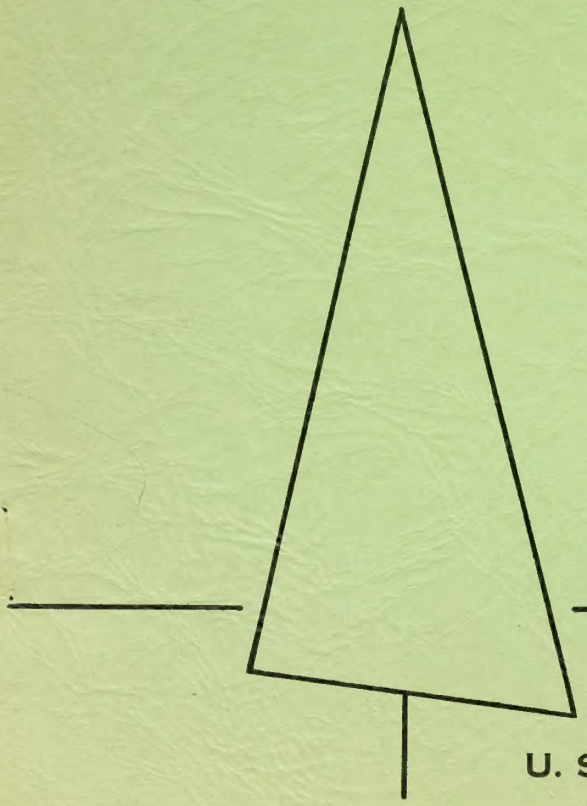

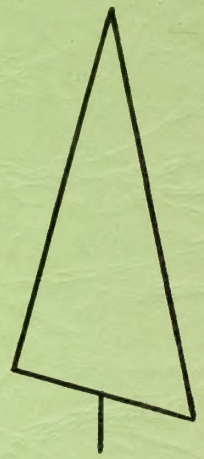

In cooperation with the Ohio Agricultural Experiment Station
L. L. Rummell, Director

U. S. DEPARTMENT OF AGRICULTURE - FOREST SERVICE

CENTRAL STATES FOREST EXPERIMENT STATION - W. G. McGINNIES, DIRECTOR

This report presents the results of a Statewide survey of Christmas tree growers in Ohio. It was conducted by the Central States Forest Experiment Station and the Ohio Agricultural Experiment Station with the cooperation of the Ohio Christmas tree growers. It is a part of the NCM-20 regional study of Christmas tree production and marketing conducted throughout the North Central States. Information was obtained during the fall of 1956 from members of the Ohio Christmas Tree Growers Council and from a 3-percent random sample of other persons, firms, and associations who had purchased conifer seedlings from the Ohio Division of Forestry during the past 10 years.

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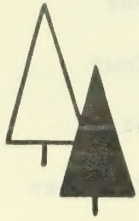

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OHIO-GROWN CHRISTMAS TREES PRODUCTION AND MARKETING

Contents

A New Industry

The Christmas tree plays an important part in the present day Yule season, and because of this, a new industry has developed. Until the 1930's nearly all Christmas trees came from natural timber stands, but since that time plantation-grown trees have assumed increasing importance. Today, thousands of farmers and other landowners grow Christmas trees. Much of the production comes from small plots of only a few acres, but some growers have Christmas tree plantations as large as 1,500 acres (3).[1/]

Federal Extension men estimate that approximately 37 million Christmas trees were used in the United States in 1955 (4). Using the population estimates of the Bureau of the Census, it appears that about 80 percent of the households in the United States used a Christmas tree in 1955.

The industry provides income for nurserymen, forest owners, seasonal laborers, truck and rail shippers, wholesalers and retailers, as well as growers. Moreover, a great many Christmas trees are grown in low-income farm areas where the submarginal farm land has either reverted naturally to trees or has been planted, providing income when other employment is relatively scarce.

Widespread interest has developed in Ohio in Christmas tree production and marketing. Ohio's large urban population as well as its proximity to other heavily populated states is advantageous for the production of Christmas trees. Much land area in Ohio lends itself to the growing of Christmas trees, and their production provides income from land unfit for cultivation.

1/ Numbers in parenthesis refer to Literature Cited, page 17.

Number and general location of Christmas trees planted in Ohio during the 10-year period 1947-1956. Each symbol represents 100,000 trees.

In 1953, the Ohio Christmas Tree Growers Council was formed. This Council, with more than 180 members, promotes improved Christmas tree production. Commercial tree nurseries now advertise and sell tree seedlings grown especially for the Christmas tree industry. Many Christmas tree retailers advertise and specialize in Ohio-grown trees. With such emphasis, Christmas tree growing and marketing promises to become an important segment of Ohio's agriculture.

Despite this interest, little has been known about Christmas tree production. Estimates as to how many seedlings are being planted annually in Ohio for the production of Christmas trees have ranged all the way from 300,000 to 600,000. Accurate figures have been lacking.

In the same way very little was known about the size and nature of the demand for Ohio-grown Christmas trees. But, because Ohio-grown trees are plantation grown rather than from natural forests, Ohio growers, if they are to operate on a business-like basis, need to plan their plantings to fit consumers' desires.

For these reasons, a survey of Christmas tree production and marketing in Ohio was begun in 1956 to find out: (1) How many trees are being grown and marketed in Ohio; (2) the statewide demand for both Ohio-grown and imported Christmas trees by species, size, and quality; and (3) the wholesaling and retailing practices, transportation methods and costs, buying and selling methods, and price ranges and averages. This report is concerned only with the production and marketing activities of Ohio growers. Facts concerning activities of Christmas tree wholesalers, retailers, and consumers will be covered in other reports.

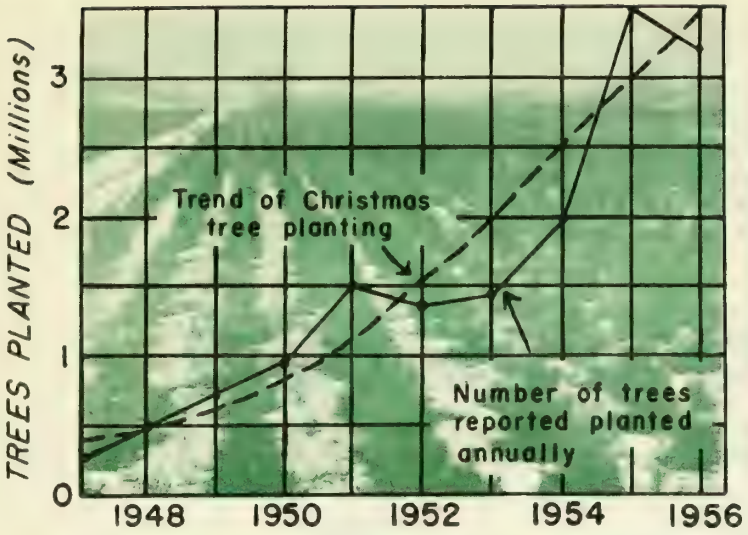
Production

Size of Christmas Tree Operations

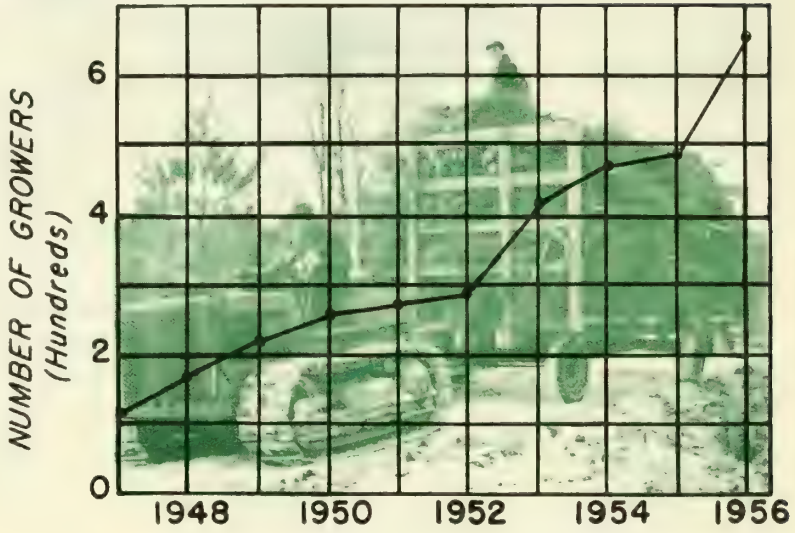
During the past 10 years more than 10,000 people in Ohio planted conifer seedlings. However, only about 900 of those who planted conifers are selling or plan to sell Christmas trees. The others planted trees for such purposes as timber production, windbreaks, game production, and erosion control. The plantings cover 12,000 to 13,000 acres. About 20 percent of the growers of Christmas trees are members of the Ohio Christmas Tree Growers Council mentioned earlier. More than 85 percent of the Christmas trees have been planted in the eastern half of the State. Although individual growers have plantations ranging in size from one-tenth of an acre up to 600 acres, the average is less than 15 acres.

Christmas tree planting is increasing each year. By 1951, growers planted three times as many trees as they did in 1948. In 1956 they planted double the number of trees they did in 1951. About 650 people planted more than 3 million Christmas trees in 1956; however, most of them planted relatively few trees as shown below:

Thousands of trees planted per grower	Percent of growers
1 - 4	74
4 - 8	14
8 - 16	6
16 - 32	3
More than 32	3
	100



Left.--Number of Christmas trees planted annually, 1947 through 1956.



Right.--Number of growers who planted Christmas trees by years, 1947 through 1956.

Species of Trees Planted

In Ohio, Scotch pine is the most popular species, accounting for nearly half the trees planted in 1956. Other species currently being planted include white pine, red pine, Norway spruce, Austrian pine, white spruce, and Douglas-fir. Only 5 years ago almost three-quarters of the Christmas trees planted were red and white pine (table 1). These are the trees being harvested now.

Table 1.--A comparison of the species of Christmas trees planted during the 1947-1951 period with species planted in 1956

Species	1947 - 1951	1956
	Percent	Percent
Scotch pine	17.0	48.5
White pine	35.5	12.5
Red pine	38.5	9.0
Norway spruce	5.5	8.5
Austrian pine	.5	7.5
White spruce	.5	5.5
Douglas-fir	.5	2.5
Colorado blue spruce	.5	2.0
Others	1.5	4.0
Total	100.0	100.0

Some Details of Production

Because Christmas tree growing is a relatively new industry, methods and technology have not yet been standardized. For example, although the average grower plants about 1,800 trees per acre, some plant only 650 and others plant as many as 3,000. The trend, however, is upward.

To meet the increased demand for well-shaped, dense Christmas trees, growers have begun to shear their Christmas trees two or three times before they are sold. Shearing the trees reduces the distances between whorls of branches, makes the trees more symmetrical, and increases the density of the foliage. Each year, growers who do not shear are finding it more difficult to sell their trees. Prices for thin, poorly shaped trees are much lower than for well-formed, dense, sheared trees. Nevertheless, in 1956 more than half the growers did not shear their trees:

Percent of trees sheared	Percent of growers shearing
0	57
1 - 25	6
25 - 50	13
50 - 75	7
75 - 100	17
	100

Marketing

Number

Ohio growers sold approximately 182,500 Christmas trees in 1955. Growers themselves harvested 75 percent of the trees and sold them to wholesalers, retailers, and consumers. The rest were sold on the stump, largely to wholesalers who cut the trees themselves. Considering all types of sales, wholesalers purchased almost 60 percent of the growers' trees.

In 1955, 40 percent (about 330) of the growers made sales. About twice as many growers sold cut trees as sold stumpage. Many growers sold trees to a number of buyers; 90 percent of the growers sold some trees to wholesalers, 22 percent sold some to retailers, and 46 percent sold some to consumers.

Growers sometimes sell trees to wholesalers early in the year; make additional sales to retailers later; and finally, if they still have trees for sale, they may open a retail yard and sell directly to the consumer.

Left.--Number of trees sold by type of buyer.

Species

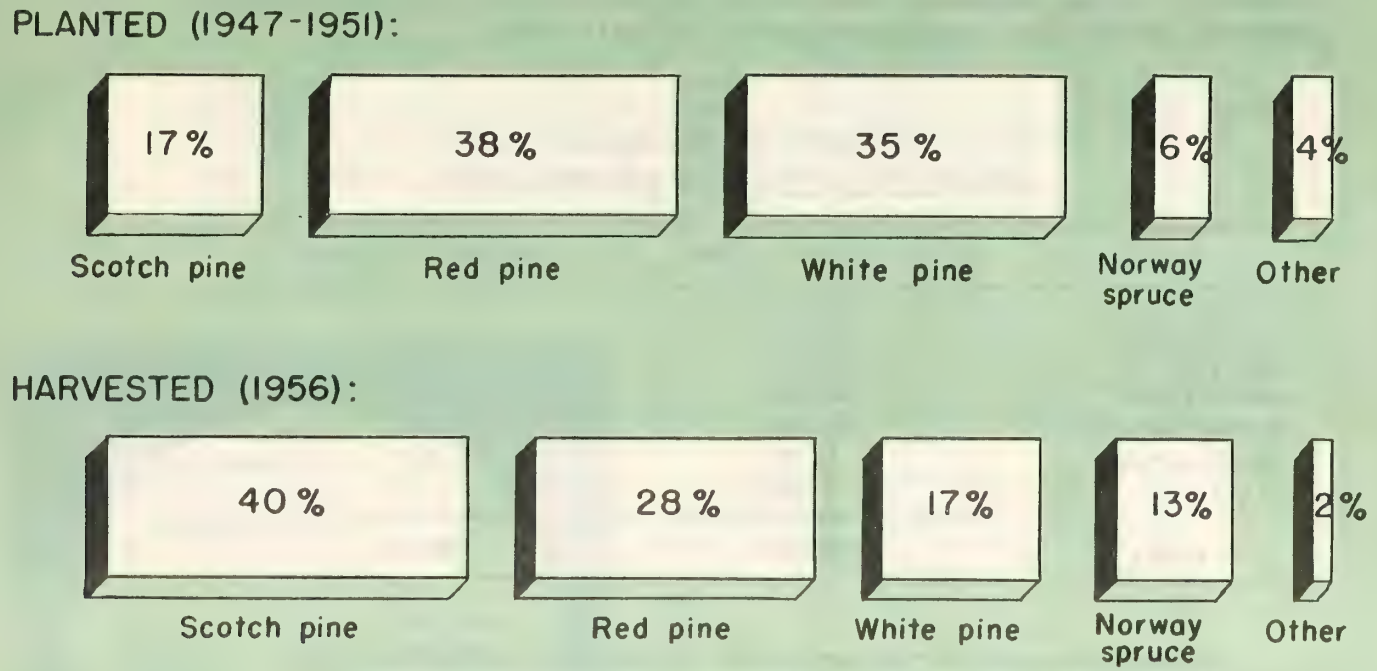
Scotch pine dominated the Ohio Christmas tree market in 1955 (table 2). Other important trees which growers were selling included red pine, white pine, and Norway spruce in that order.

Table 2.--Distribution of Christmas trees sold by Ohio growers, by species, 1955

Species	Number of trees	Percent of trees
Scotch pine	72,000	39.5
Red pine	53,000	29.0
White pine	30,500	16.7
Norway spruce	24,000	13.2
White spruce	1,800	1.0
Other	1,200	.6
Total	182,500	100.0

Scotch pine and Norway spruce are normally cut for Christmas trees if they will make suitable trees. Other species are cut for Christmas trees much less frequently.

COMPARISON OF SPECIES PLANTED AND HARVESTED



Above.--The percent of each tree species planted 1947-1951 compared with the percent of each tree species harvested for Christmas trees 1956.

Grades

Growers are beginning to sell Christmas trees by grade. One of the earliest grading systems was developed in Montana by the Northern Rocky Mountain Forest Experiment Station of the U. S. Forest Service (2). This system formed the basis for the set of grades adopted by the Federal Government. These U. S. Grades may be used to define tree quality where the buyer and the seller so specify (table 3).

Table 3.--United States Standards for Christmas trees (4)

Factor[1]	U. S. Premium	U. S. No. 1	U. S. No. 2
Density	Medium	Medium	Light
Taper	Normal	Normal (flaring or candlestick if tree is otherwise U. S. Premium)	Normal (flaring or candlestick if tree is otherwise U. S. No. 1)
Balance	4 complete faces	3 complete faces	2 complete faces
Foliage	Fresh, clean, and healthy	Fresh, clean, and healthy	Fresh, fairly clean, and free from damage
Deformities	Not more serious minor	Not more serious than minor (noticeable deformities permitted if tree otherwise U. S. Premium)	Not more serious than minor (noticeable deformities permitted if tree otherwise U. S. No. 1)

1/ Factor, quality, size, and species definitions are explained in the source document.

The Ohio Christmas Tree Growers Council is studying the U. S. Standards and may propose voluntary use of them for interstate shipments of trees. To date, however, those who have used grades used their own or buyers' grades. About 12 percent of the growers reported that they were selling trees by grade. Their sales accounted for approximately 8 percent of the trees sold in 1955.

Prices

Christmas tree prices vary greatly according to species, size and quality, accessibility to roads, nearness to markets, costs of growing the trees, the bargaining power of the grower and the buyer, and, in the case of cut trees, the costs of harvesting and delivering. The usual range in prices and the average prices that growers obtained for each species is summarized in table 4.

Evergreen Bough Sales

About 40 percent of the growers who sold Christmas trees also sold boughs to be used for wreaths and other home decorations. Some boughs are also used for grave decorations. For the most part, growers obtained the boughs from poorly formed and oversize trees. Approximately 200,000 pounds of boughs were sold, an average of about 1,500 pounds per grower.

Table 4.--Prices paid Ohio growers for Christmas trees, 1955

(In dollars)

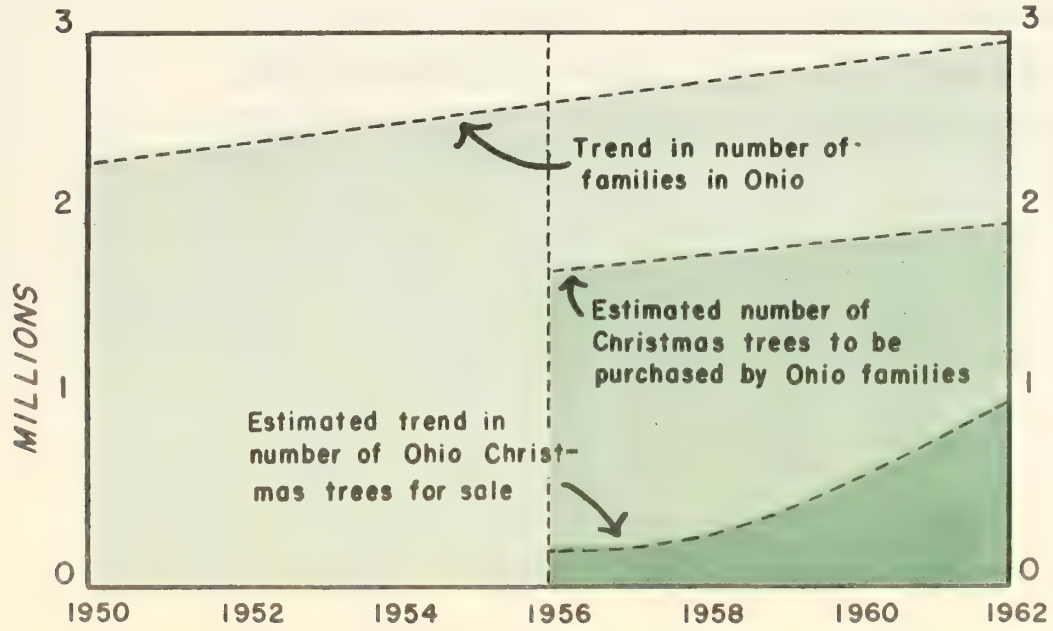
Species	Uncut trees		Cut trees			
			By wholesalers and retailers		By consumers	
	Range 1/	Ave.	Range 1/	Ave.	Range 1/	Ave.
Scotch pine	1.08-4.75	2.05	1.50-3.00	2.00	3.00-8.50	4.30
White pine	1.00-5.50	1.55	1.00-3.00	1.75	2.60-4.60	2.80
Red pine	.92-4.50	1.55	1.00-2.00	1.25	2.30-5.00	3.00
Norway spruce	.75-4.25	2.40	2.00-3.50	2.50	3.00-10.00	4.75
White spruce	1.35-7.50	3.10	---	--	---	--
Others	1.00-4.00	1.30	2.00-9.00	2.50	2.00-10.00	4.50

1/ Extreme prices omitted.

Looking Ahead

What about the future? Are Ohio growers likely to flood the market with trees in a few years? To answer this question, let us consider population trends.

The 1950 census showed that there were 2,314,600 families in Ohio and the number of families has been increasing more than 2 percent each year since 1940. About 90 percent of the families in Ohio are either urban or rural non-farm families. Purchases of Christmas trees by non-farm families in the metropolitan Columbus area were studied in 1956. If all Ohio non-farm families purchased Christmas trees in about the same proportion as did those studied, at least 1 1/2 million Christmas trees were purchased by urban and non-farm rural families in 1950. A 22-percent increase in the number of families between 1950 and 1960 would provide a potential market for almost 2 million Christmas trees by 1960.



Left.--A comparison of estimated future demand for Christmas trees in Ohio with probable supply of Ohio-grown trees.

An estimate of the probable future supply and demand situation can be made on the basis of population growth, Christmas tree planting records, and Christmas tree sales information. Ohio Christmas tree production is not likely to completely meet the demand for Christmas trees in Ohio by 1962. However, the number of trees being planted are increasing each year and if this trend continues prospective crops may well exceed demand.

Summary and Conclusions

Ohio's Christmas tree production is rapidly expanding, but as yet it supplies only a small portion of the consumer demand for Christmas trees. Ohio trees should become increasingly plentiful in the market. Growers are planting more trees every year. In 1956, growers planted twice as many trees as they did in 1951.

Almost half the trees planted in Ohio in 1956 were Scotch pine. Other trees that are gaining in importance are Norway spruce, Austrian pine, white spruce, and Douglas-fir. Older favorites that are still important but have lost ground are red pine and white pine.

Approximately 900 individuals and firms are now in the business of growing Christmas trees. Individual growers have plantations ranging in size from one-tenth of an acre to 600 acres. More than 85 percent of the Christmas trees are planted in eastern Ohio. Almost half of the Christmas tree growers shear their trees in order to improve their shape and density.

Christmas tree growers sell to wholesalers, retailers, and consumers. In 1955, they sold more than 182,000 Christmas trees. The normal range of prices for uncut Christmas trees was between $0.75 and $5.50 in 1955. For cut trees, growers usually received between $2.00 and $10.00.

Christmas tree growing and marketing requires skill and planning. The grower can no longer merely plant his trees, wait 5 to 8 years, then sell them to eager buyers who are clamoring for them. If Ohio Christmas tree growers are to get an increasing share of the market, they must plan both their growing and marketing activities. One thing of increasing importance is to produce a quality product, only trees with good color and good shape are in demand. This means the growers will need to plant the popular species and shear and shape the trees. Consideration should also be given to planting species that can be sold for other uses than Christmas trees.

Growers need to develop better market channels. They need to contact wholesalers and retailers early in the market season and offer trees in larger quantities. This may call for a cooperative sales organization or other types of concentration. Advertising "Ohio-grown trees" should prove helpful.

Finally, growers, wholesalers, retailers, and consumers would benefit if the standard Christmas tree grades were in common use. There is a genuine interest in standard grades, but the U. S. Standards for Christmas Trees are not yet accepted by all market operators.

If Ohio growers do improve their growing and marketing practices, the present acreage planted to Christmas trees still will not supply much more than half of the demand for Christmas trees in Ohio in 1962.

Growers who grow trees which Ohio consumers prefer can expect good market opportunities for at least the next 5 years. However if present planting and plantation management trends continue, the prospective crops of Ohio-grown trees may exceed demand within the next 10 to 15 years.

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